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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/762,573

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EXAMINER

AMADIZ, RODNEY

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

11/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/762,573	OKUDA ET AL.	
	Examiner	Art Unit	
	Rodney Amadiz	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. Claim 1 is objected to because of the following informalities: Line 8 reads "a second light-emitting display panel located behind said transmissive display panel and"

Please change to read as follows:

— a second light-emitting display panel located behind said transmissive light-emitting display panel and—. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (U.S. Patent 5,912,649—hereinafter "Hattori") in view of Sotoguchi (JP02002221730—herein referred to as "Sotoguchi").

As to **Claim 1**, Hattori teaches a three-dimensional image display device comprising: at least one transmissive light-emitting display panel (***Fig. 1, Reference***

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Number 20 and Col. 2, lines 46-57) including patterned conductors (Fig. 1, Conductive pattern 21 and 25) each including a plurality of light emitting portions (Fig. 1, note the intersection of 21 and 25—see Fig. 5 for an example) and a bus line extending in a horizontal or vertical direction and bridged and connected to the light-emitting portions so that the light-emitting portions of patterned conductors are arranged in two dimensions (Although not exclusively shown for this transmissive panel, see Fig. 5, and note arrangement of conductors 15 and 11 for the second light-emitting display panel which would be the same arrangement for conductors 21 and 25 for the first transmissive light-emitting display panel); a second light-emitting display panel located behind said transmissive light-emitting display panel (Fig. 1, Reference Number 10 and Col. 2, lines 25-45) and including patterned conductors (Fig. 5, Reference Numbers 11 and 15) each including a plurality of light-emitting portions (Fig. 5, note intersection of 11 and 15) and a bus line extending in a horizontal or vertical direction and bridged and connected to the light-emitting portions so that the light-emitting portions of patterned conductors are arranged in two dimensions (See Fig. 5, and note arrangement of conductors 15 and 11), wherein the patterned conductors in one of said transmissive and second light-emitting display panels are different from those in another of said transmissive and second light-emitting display panels (Fig. 1, note that the patterned conductors of the first transmissive light-emitting display panel (21 and 25) are different than the patterned conductors of the second light-emitting display panel (11 and 15—note that 15 comprises 15a and 15b)). Hattori, however, fails to teach that each of the patterned

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conductors in the one of said transmissive and second light emitting display panels is formed into a zigzag whereby moiré is prevented. Examiner cites Sotoguchi to teach patterned conductors formed into a zigzag whereby moiré is prevented (**Note Abstract and See Figs. 2-5, patterned conductors 8 and 9**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the patterned conductors into a zigzag pattern as taught by Sotoguchi in the three-dimensional image display device taught by Hattori in order to help eliminate the moiré fringe (**Sotoguchi—Solution**).

As to **Claim 2**, Hattori teaches the light-emitting portions of said transmissive light-emitting display panel are located in a periodic pattern (**Hattori—Fig. 1, note intersection of elements 21 and 25 as portrayed in Fig. 5 for the second light-emitting display panel**); and said second light-emitting display panel has light-emitting portions located in a periodic pattern (**Hattori—Fig. 5, note intersection of elements 11 and 15**).

As to **Claim 3**, Hattori teaches the periodic patterns each have a matrix layout (**Hattori—Fig. 5, note matrix layout and Col. 2, lines 40-42 and 51-53**).

As to **Claim 6**, Hattori, teaches the light-emitting portion is formed in a rectangular form (**Hattori—Fig. 5, note that intersection of elements 11 and 15 is rectangular**).

As to **Claim 7**, Hattori fails to teach the light-emitting portion is formed in a hexagonal form. Examiner cites Sotoguchi to teach a light-emitting portion formed in a hexagonal form (**Fig. 2**). At the time the invention was made, it would have been

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obvious to a person of ordinary skill in the art to form the light-emitting portion into a hexagonal form as taught by Sotoguchi in the three-dimensional image display device taught by Hattori in order to help eliminate the moiré fringe (**Sotoguchi—Solution**).

As to **Claim 8**, Hattori fails to teach the light-emitting portion is formed in a rhombic form. Examiner cites Sotoguchi to teach a light-emitting portion formed in a rhombic form (**Fig. 5**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the light-emitting portion into a rhombic form as taught by Sotoguchi in the three-dimensional image display device taught by Hattori in order to help eliminate the moiré fringe (**Sotoguchi—Solution**).

As to **Claim 9**, Hattori fails to teach the patterned conductors having a pitch of P set there between, and the light-emitting portions alternately arrayed in the patterned conductors have a pitch $P/2$ set there between. Examiner cites Sotoguchi to teach the patterned conductors having a pitch of P set there between, and the light-emitting portions alternately arrayed in the patterned conductors have a pitch $P/2$ set there between (**Fig. 2**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the patterned conductors with a pitch P and the light-emitting portions with a pitch $P/2$ as taught by Sotoguchi in the three-dimensional image display device taught by Hattori so as to eliminate the moiré fringe (**Sotoguchi—Solution**).

As to **Claim 10**, Hattori teaches said transmissive and second light-emitting display panels are located, with respect to one another, so as to eliminate correlation between both the patterned conductors of said transmissive and second light-emitting

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display panels (**Fig. 1, note how the transmissive panel 20 is located with respect to the second light-emitting display panel 10, furthermore, note that in this position a clear image can be presented (Col. 1, lines 29-62).**

5. Claims 4, 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori and Sotoguchi as applied to claims 1-3 and 6-10 above, and further in view of Yokoyama (U.S. Patent 6,429,599—hereinafter “Yokoyama”).

As to **Claim 4**, Hattori teaches supplying holes or electrons to the light-emitting layer (**Hattori—Col. 2, lines 56-57-note that electron movement is inherent when current is applied to the electrodes**). Hattori also teaches a pair of transparent electrodes sandwiching the light-emitting layer (**Hattori—Fig. 1, Reference numbers 21 and 25**); and one of the transparent electrodes is connected to the bus line (**Fig. 1, note bus lines 25**). Hattori, as modified by Sotoguchi, however, fails to teach the light-emitting portion of said transmissive light-emitting display panel including at least one organic compound material layer made of an organic compound. Examiner cites Yokoyama to teach a light-emitting portion of a transmissive light-emitting display panel including at least one organic compound material layer (**Yokoyama—Col. 1, lines 10-15**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the light-emitting layer of an organic compound as taught by Yokoyama in the three-dimensional image display device taught by Hattori, as modified by Sotoguchi, in order to simplify the manufacturing process through the use of inkjet patterning.

As to **Claim 5**, Hattori teaches the one transparent electrode connected to the bus line is a cathode (**Fig. 1, element 25**).

As to **Claim 11**, Hattori, as modified by Sotoguchi, fails to teach each of the light-emitting portions including a light-emitting layer made of an organic compound exhibiting electro-luminescence. Examiner cites Yokoyama to teach that the use of organic material in electroluminescent display panels is well known (**Yokoyama—Col. 1, lines 10-15**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the light-emitting layer of an organic compound as taught by Yokoyama in the three-dimensional image display device taught by Hattori, as modified by Sotoguchi, in order to simplify the manufacturing process through the use of inkjet patterning.

Response to Arguments

6. Applicant's arguments filed September 12, 2007 have been fully considered but they are not persuasive. As to Claim 1, the Applicant argues "Hattori, however, is silent about alignment of the patterned conductors in the front and rear electro-luminescent units. Hattori therefore fails to teach that the ***pattern of conductors*** in the front electro-luminescent unit is different from that of the rear electro-luminescent unit." (Emphasis added) (Pg. 6, 1st paragraph). Examiner points out that the claim recites "patterned conductors" being different not specifically the "pattern of conductors". Hattori clearly teaches that the "patterned conductors" (21 and 25) of the front electro-luminescent

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unit are different from the "patterned conductors" of the rear electro-luminescent unit (11 and 15—to which 15 comprises 15a and 15b).

The Applicant also argues that "Sotoguchi's device is a liquid crystal display device, which is not a three-dimensional image display device of the self-emission type such as an EL display. Thus, it would not be obvious to combine Sotoguchi's LCD electrode structure with plural EL panels for a three-dimensional image display device in order to offer a clear picture image to the observer." To better clarify this response, the Examiner is not trying to combine elements of an LCD into an EL. The Examiner is merely taking the teachings of well-known LCD structures (i.e. zigzag patterns) and applying them to EL devices to solve the common problem of moiré fringe. The Examiner also points out that both LCD display devices and EL display devices are analogous in art. In addition, Sotoguchi does not state that the ability to eliminate moiré is dependent only upon LCD specific displays. For instance, Sotoguchi's Abstract states that moiré fringe could be eliminated because a zigzag pattern is used as opposed to a lattice of rectangular pixel electrodes. This implies that moiré fringe could be eliminated in any display device that utilizes rectangular, square or box-like pixels (i.e. eliminating moiré fringe is not display dependent). Therefore, the same method used to eliminate moiré fringe in LCD devices can be applied to EL devices. Lastly, *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992) states that "A prior art reference is analogous if the reference is in the field of applicant's endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned." MPEP 214.01 (a). In this application, Sotoguchi is

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reasonably pertinent to the particular problem (eliminating moiré fringe) with which the inventor was concerned.

Conclusion

7. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 12, 2007 has been entered.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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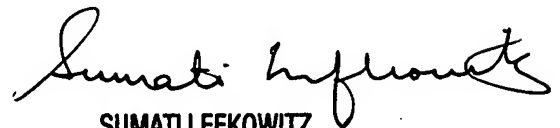
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